

WHAT IS CLAIMED IS:

1. An image heating device, comprising:
a conductive heat generating member that transfers heat directly or
5 indirectly to a body to be heated that is allowed to travel while carrying an
image;
an excitation unit that is provided close to the heat generating
member and generates magnetic flux so as to cause the heat generating
member to generate heat by electromagnetic induction; and
10 a heat generation suppressing unit that suppresses heat generation
of the heat generating member by regulating the magnetic flux generated by
the excitation unit,
wherein the heat generation suppressing unit suppresses heat
generation of the heat generating member in a region corresponding to a
15 region including at least a center portion of the body to be heated in a width
direction.
2. The image heating device according to claim 1,
wherein bodies to be heated of varying dimensions in the width
20 direction are allowed to travel such that a center position of each of the
bodies to be heated in the width direction coincides with a common position
substantially at a center of the heat generating member.
3. The image heating device according to claim 1,
25 wherein the heat generation suppressing unit cancels out at least
part of the magnetic flux generated by the excitation unit using an electric
current induced by an induction electromotive force that is generated due to
the magnetic flux generated by the excitation unit.
- 30 4. The image heating device according to claim 1,
wherein the excitation unit includes a plurality of cores that are
arranged at a distance from each other in the width direction and an
excitation coil, and a distance between the adjacent cores in a center portion
in the width direction is smaller than a distance between the adjacent cores
35 in each of end portions in the width direction.
5. The image heating device according to claim 1,

wherein the excitation unit includes a plurality of cores that are arranged at a distance from each other in the width direction and an excitation coil, and of the plurality of cores, at least the core positioned in a center portion in the width direction is moved by the heat generation
5 suppressing unit.

6. The image heating device according to claim 1,
wherein the excitation unit includes a plurality of cores that are arranged in the width direction and an excitation coil, and the core arranged
10 in a center portion in the width direction has a magnetic permeability higher than a magnetic permeability of the core arranged in each of end portions in the width direction.

7. The image heating device according to claim 1,
15 wherein the excitation unit includes a plurality of cores that are arranged in the width direction and an excitation coil, and a cross sectional area in a plane orthogonal to the magnetic flux of the core arranged in a center portion in the width direction is larger than a cross sectional area in the plane orthogonal to the magnetic flux of the core arranged in each of end
20 portions in the width direction.

8. The image heating device according to claim 1,
wherein the heat generation suppressing unit includes a
loop-shaped conductor that links to at least part of the magnetic flux
25 generated by the excitation unit and a switching unit that makes/interrupts electrical connection to a loop of the conductor.

9. The image heating device according to claim 8,
wherein the loop-shaped conductor is disposed so that a region in
30 which the body to be heated of a small width is passed is overlapped with at least part of the conductor.

10. The image heating device according to claim 8,
wherein when a body to be heated of a small width is passed, the
35 switching unit opens the loop of the conductor.

11. The image heating device according to claim 8,

wherein the excitation unit includes an excitation power source that generates an electric current varying with time and an excitation coil that is supplied with an electric current by the excitation power source, and

5 when an electric current induced in the loop of the conductor has a value in the vicinity of 0, the switching unit is switched over.

12. The image heating device according to claim 11,
wherein when the switching unit is switched over, an electric current is not applied to the excitation coil.

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13. The image heating device according to claim 8,
wherein the excitation unit includes an excitation power source that generates an electric current varying with time and an excitation coil that is supplied with an electric current by the excitation power source, and
15 when a voltage induced in the loop of the conductor has a value in the vicinity of 0, the switching unit is switched over.

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14. The image heating device according to claim 13,
wherein when the switching unit is switched over, an electric current is not applied to the excitation coil.

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15. The image heating device according to claim 8,
wherein the excitation unit includes an excitation power source that generates an electric current varying with time and an excitation coil that is supplied with an electric current by the excitation power source, and
25 the switching unit is switched over in synchronization with a change in an electric current or a voltage of the excitation coil.

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16. The image heating device according to claim 8,
30 wherein the conductor forms a plurality of loops, and at least one of the plurality of loops links to magnetic flux that does not link to the other loops.

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17. The image heating device according to claim 8,
35 wherein the loop of the conductor is inclined with respect to magnetic flux linking to the loop of the conductor.

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18. An image forming apparatus comprising an image heating device as claimed in claim 1,

wherein the image heating device fixes a toner image carried by a recording paper sheet.

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